

**What is claimed is**

1. A protein having the following characteristics
  - (a) Molecular weight : about 47 kDa on SDS-  
5 PAGE,
  - (b) Optimal pH : pH 3.5 - pH 4.5,
  - (c) Optimal temperature : 45°C - 55°C,
  - (d) Substrate specificity : phytate, p-  
nitrophenyl phosphate, tetrasodium  
10 pyrophosphate, ATP or ADP,
  - (e) Michaelis constant of 0.3 - 0.5 mM  
utilizing phytate as a substrate,
  - (f) High resistance to protease such as  
pepsin, trypsin, papain, elastase or  
15 pancreatin.
2. The protein as set forth in claim 1, wherein  
the protein contains an amino acid sequence  
represented by SEQ. ID. No 2 at N-terminal.  
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3. The protein as set forth in claim 2, wherein  
the protein contains an amino acid sequence  
represented by SEQ. ID. No 7 or an amino acid  
sequence having over 70% sequence homology  
25 with the same.

4. The protein as set forth in claim 2 or claim 3,  
wherein the specific activity of the protein  
to phytate is over 1,500 units/mg.
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5. The protein as set forth in claim 4, wherein  
the specific activity of the protein to  
phytate is over 3,000 units/mg.
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6. A gene coding the protein of claim 3.
7. The gene as set forth in claim 6, wherein the  
gene has a base sequence represented by SEQ.  
ID. No 6 or a base sequence having over 70%  
15 sequence homology with the same.
8. A *Citrobacter braakii* YH-15 strain producing  
the protein of claim 1 (Accession No: KCCM  
10427).
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9. A feed additive containing the strain of claim  
8 or the protein of claim 1 as an effective  
ingredient.
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